

Atty. Ref.:HSJ9-2003-0156US1 (60717-342001)

Page 2 of 16

Claims:

Please amend the claims as in the following listing:

- 1 1. (Currently amended) A method for fabricating recording head sliders made from
2 silicon substrates with SiO₂ overcoats, comprising:
3 A) providing a Si wafer which has been fabricated with a SiO₂ overcoat;
4 B) depositing a layer of DRIE-resistant material on said SiO₂ overcoat, wherein
5 said DRIE-resistant material is Al₂O₃;
6 C) depositing a patterned layer of RIE-resistant material on said layer of DRIE-
7 resistant material to form a primary mask;
8 D) etching by RIE through said primary mask to pattern said SiO₂ overcoat layer
9 and said layer of DRIE-resistant material;
10 E) removing said primary mask to expose said layer of DRIE-resistant material
11 which has now been patterned to form a secondary mask;
12 F) etching by DRIE through said secondary mask to cut said Si wafer into pieces;
13 and
14 G) removing said secondary mask.
- 1 2. (Original) The method of fabrication of claim 1, wherein:
2 said RIE-resistant material is a metal.
- 1 3. (Original) The method of fabrication of claim 1, wherein:
2 said RIE-resistant material is a transition metal.
- 1 4. (Previously amended) The method of fabrication of claim 1, wherein:
2 said RIE-resistant material is chosen from the group consisting of Cu, NiFe, and
3 transition metals.
- 1 5. (Canceled)
- 1 6. (Original) The method of fabrication of claim 1, wherein:
2 said C) depositing a patterned layer of RIE-resistant material on said layer of
3 DRIE-resistant material to form a primary mask comprises;
4 i) applying, exposing and developing photoresist to create the pattern;
5 ii) plating the layer of RIE-resistant material into the photo-resist pattern; and
6 iii) stripping the photo-resist.
- 1 7. (Original) The method of fabrication of claim 6, wherein said C) depositing a
2 patterned layer of RIE-resistant material on said layer of DRIE-resistant material to form
3 a primary mask further comprises;
4 applying a seed layer of RIE-resistant material before applying said photoresist.

Atty. Ref.:HSJ9-2003-0156US1 (60717-342001)

Page 3 of 16

- 1 8. (Original) The method of fabrication of claim 7, wherein:
2 said D) etching by RIE further comprises:
3 first sputter-etching away said seed layer of RIE-resistant material before
4 RIE.
- 1 9. (Original) The method of fabrication of claim 1, wherein:
2 said E) removing said primary mask is done by selective wet etching.
- 1 10. (Original) The method of fabrication of claim 1, wherein:
2 said F) removing said secondary mask is done by selective wet etching.
- 1 11. (Currently amended) A method for fabricating recording head sliders made from
2 silicon substrates, comprising:
3 A) producing a SiO₂ overcoat on said Si wafer;
4 B) depositing a layer of DRIE-resistant material on said SiO₂ overcoat, wherein
5 said DRIE-resistant material is Al₂O₃;
6 C) depositing a RIE mask on said layer of DRIE-resistant material;
7 D) etching by RIE through said RIE mask to pattern said SiO₂ overcoat layer and
8 form a DRIE mask from said DRIE-resistant material;
9 E) removing said RIE mask to expose said DRIE mask;
10 F) etching by DRIE through said DRIE mask to cut said Si wafer; and
11 G) removing said DRIE mask.
- 1 12. (Original) The method of fabrication of claim 11, wherein:
2 said RIE-resistant material is a metal.
- 1 13. (Original) The method of fabrication of claim 11, wherein:
2 said RIE-resistant material is a transition metal.
- 1 14. (Previously amended) The method of fabrication of claim 11, wherein:
2 said RIE-resistant material is chosen from the group consisting of Cu, NiFe, and
3 transition metals.
- 1 15. (Canceled)
- 1 16. (Original) The method of fabrication of claim 11, wherein:
2 C) depositing a RIE mask on said layer of DRIE-resistant material comprises;
3 i) applying, exposing and developing photoresist to create the pattern;
4 ii) plating the layer of RIE-resistant material into the photo-resist pattern;
5 and
6 iii) stripping the photo-resist.
- 1 17. (Original) The method of fabrication of claim 16, wherein:
2 C) depositing a RIE mask on said layer of DRIE-resistant material further
3 comprises:

Atty. Ref.:HSJ9-2003-0156US1 (60717-342001)

Page 4 of 16

4 i) applying a seed layer of RIE-resistant material before applying said
5 photoresist.

1 18. (Original) The method of fabrication of claim 17, wherein:
2 said D) etching by RIE further comprises:
3 first sputter-etching away said seed layer of RIE-resistant material before
4 RIE.

1 19. (Original) The method of fabrication of claim 11, wherein:
2 said E) removing said RIE mask is done by selective wet etching.

1 20. (Original) The method of fabrication of claim 11, wherein:
2 said F) removing said DRIE mask is done by selective wet etching.